

RELIAINT LABS

TESTING SERVICES

Accelerated Stress Testing by

Reliant Labs improves product design and manufacturing processes while driving costs down and ensuring customer satisfaction. Using state of the art testing methods to expose latent defects, Reliant Labs effectively determines your products' operating margins and develops solutions that provide measurable results and positive impact on your bottom line.

Reliant Labs is committed to the advancement of Accelerated Stress Testing through research and experimentation. Customer service is our top priority. We pride ourselves in going above and beyond customer expectations.

RELIAINT LABS, INC.
925 Thompson Place
Sunnyvale, CA 94085
OFFICE (408) 737-7500
WEB reliantlabs.com
EMAIL info@reliantlabs.com

Highly Accelerated Life Testing (HALT) – an effective tool using cold temperature, hot temperature, thermal transitions, and random vibration to expose latent defects and weak links during a product's design phase. By eliminating failure mechanisms found during the HALT process, product reliability is improved in a short period of time. Using high levels of stress, in just a few days HALT exposes the same failure modes that are likely to occur under normal stress conditions over an extended period of time.

Highly Accelerated Stress Screening (HASS) / Environmental Stress Screening (ESS) – a screening process utilizing rapid thermal transitions and random vibration to expose process variations in manufacturing. HASS is used to monitor outgoing quality and improve product reliability.

HASS Development – a method of developing and defining a production screen used for HASS. HASS development verifies the screen finds manufacturing flaws and not take significant life out of the product.

No Trouble Found (NTF) Verification Testing – a screening technique used to classify NTF units as good or defective. Defective units are sent for failure analysis and corrective action is taken to prevent future occurrences. Passing units are returned to final test and are placed into inventory as sellable goods.

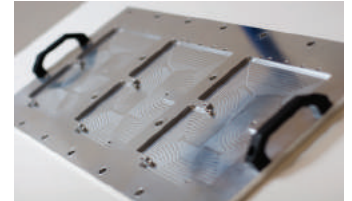
Power Supply Characterization and Evaluation – Given that power supplies are such a critical component in your systems design, ensuring power supply reliability is paramount to reducing field failures, building customer satisfaction, and lowering warranty cost. Reliant Labs' power supply evaluation services are available to expedite your design requirements, free up valuable engineering resources, and close the loop on your power conversion products.

IR Thermography Thermal Characterization and Analysis – Thermal imaging fault isolation techniques employed by Reliant Labs provide a comprehensive thermal analysis of your product. Thermography quickly scans for potential hot spots and is a great tool for fault isolation.

Thermal Cycling and Humidity Testing – temperature testing from -100°C to +200°C. Non-condensing humidity from 10% to 95% R.H.

Mean Time Between Failures Predictions - MTBF calculations produced in the design phase to predict a product's future reliability in the field.

On-site Consulting – HALT and HASS, customer training, launch and support internal lab.



RELIAINT LABS

Reliant Labs is an innovative reliability testing laboratory dedicated to partnering with customers to make their products last longer, lower warranty costs, and boost customer satisfaction. Reliant Labs' commitment to unmatched flexibility, responsiveness, and personalized support has helped companies improve their products, manufacturing processes and profitability since 2002.

Serving engineering and equipment manufacturers with operations in the United States, Mexico, Asia, Europe, and Canada, Reliant Labs offers a wide range of reliability testing services including:

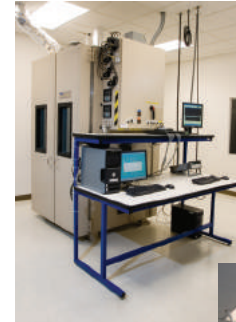
HALT (Highly Accelerated Life Testing)
HASS (Highly Accelerated Stress Screen Development)
NTF (No Trouble Found) Verification
Temperature and Humidity
Power Supply HALT, HASS and Comparison Testing
IR Thermography

As one of the largest and busiest HALT labs in the world, Reliant Labs quickly and accurately delivers knowledge resources, technical skills, and practical experience along with the most comprehensive test reports in the industry – confidentially, on time and within budget.

Reliant Labs quickly and reliably delivers the most comprehensive test reports in the industry.

CHAMBER FEATURES

Temperature: -100°C to +200°C
Thermal Transition: 65°C / minute
Vibration: multi-axis repetitive shock vibration exceeding 50 Grms
Five HALT Labs: table dimensions from 30" x 30" and 36" x 36"



LABORATORY FEATURES

- Full service HALT and HASS testing facility
- MTBF predictions, thermal cycling, humidity and RDT
- Vibration data collection – variety of lightweight low profile accelerometers with 6 channel spectrum analyzer
- Temperature and voltage monitoring – 20-channel data acquisition unit
- General laboratory equipment



- o 9kW AC power source with voltage and frequency margining
- o 12kW DC power source
- o DC electronic loads
- o Oscilloscope
- o Power harmonics analyzer
- o Multimeters
- o Boom microscope
- o Torque drivers
- o Soldering stations
- o Computers & monitors
- o Peripheral equipment – hand tools, loop backs, screws, cables

- Custom fixture design and fabrication
- Extensive inventory of connectors and cable harness fixturing
- Video microscope with 130x zoom and digital camera
- ESD safe environment
- Comfortable lab setting

